Table 5: Integrase

			(
MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
164 1C4	IN(1-16 HXB2)	RT(716-731)	FLDGIDKAQDEHEKYH?	Z	bacterial expressed integrase	$murine(\mathrm{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Haugan et al.(1995), Nilsen et al.(1996)] NOTES:	er 195), Nilsen et al.(1996)]			
	 1C4: MAb interferes with 1C4: One of a large set of: 6G5, 7B6, 7C6 – these M [Nilsen et al.(1996)] 	integrase binding MAbs that interac Abs inhibit end pi	1C4: MAb interferes with integrase binding to DNA [Haugan et al.(1995)] 1C4: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8, 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)]	egrase: 1C4, 2C	711, 2E3, 3E11, 3F9, 5F8, t on integration activities	
165 2C11	IN(1-16 HXB2)	RT(716-731)	FLDGIDKAQDEHEKYH?	Z	bacterial expressed integrase	$murine(\mathrm{Ig}\mathrm{G}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Nilsen et al.(1996)] NOTES: • 2C11: One of a large set of M	er 96)] ² MAbs that interac	nor: B. Ferns and R. Tedder erences: [Nilsen et al.(1996)] TES: 2C11: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8,	tegrase: 1C4, 20	C11, 2E3, 3E11, 3F9, 5F8,	
	• 2C11: One of a large set of 6G5, 7B6, 7C6 – these M [Nilsen et al.(1996)]	MAbs that interace Abs inhibit end property	2C11: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little [Nilsen et al.(1996)]	tegrase: 1C4, 20 it had little effec	24, 2C11, 2E3, 3E11, 3F9, 5F8, effect on integration activities	
166 2E3	IN(1-16 HXB2)	RT(716-731)	RT(716-731) FLDGIDKAQDEHEKYH?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{Ig}\mathrm{G}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Nilsen et al.(1996), Ovod et al.(1992)] NOTES:	er 96), Ovod et al.(19	92)]			
	 2E3: There are two MAbs 2E3: One of a large set of 6G5, 7B6, 7C6 – these M [Nilsen et al.(1996)] 	s called 2E3 – the MAbs that interact Abs inhibit end pu	2E3: There are two MAbs called 2E3 – the other one binds to Nef [Ovod et al.(1992)] 2E3: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8, 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)]	egrase: 1C4, 2C thad little effec] 4, 2C11, 2E3, 3E11, 3F9, 5F8, effect on integration activities	

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
167 3E11	IN(1-16 HXB2)	RT(716-731)	FLDGIDKAQDEHEKYH?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{Ig}\mathrm{G}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Otteken et al.(1992), Nilsen et al.(1996)] NOTES:	er 1992), Nilsen et al.	(1996)]			
	 3E11: There is another M 3E11: Recognized an epit 3E11: One of a large set of 6G5, 7B6, 7C6 – these M [Nilsen et al.(1996)] 	Ab with this ID to ope present on Head Market Interaction Head Substitution of the Abs inhibit end part of the Abs	3E11: There is another MAb with this ID that recognizes p17 [Otteken et al.(1992)] 3E11: Recognized an epitope present on HIV-2/SIVmac, SIVagm, HIV-1, and SIVmnd [Otteken et al.(1992)] 3E11: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8, 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)]	al.(1992)] and SIVmnd [C tegrase: 1C4, 2C tt had little effec	tteken et al.(1992)] C11, 2E3, 3E11, 3F9, 5F8 et on integration activitie	, % ₂₀
168 3F9	IN(1-16 HXB2)	RT(716-731)	FLDGIDKAQDEHEKYH?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{Ig}\mathrm{G}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Nilsen et al.(1996)]	er (6)]				
	 3F9: One of a large set of: 6G5, 7B6, 7C6 – these M [Nilsen et al.(1996)] 	MAbs that interac Abs inhibit end p	3F9: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8, 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)]	egrase: 1C4, 2C it had little effec	11, 2E3, 3E11, 3F9, 5F8 t on integration activitie	·
169 5F8	IN(1-16 HXB2)	RT(716-731)	FLDGIDKAQDEHEKYH?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Haugan et al.(1995), Nilsen et al.(1996)] NOTES:	r 95), Nilsen et al.	(1996)]			
	 5F8: There is another MA 5F8: MAb interferes with 5F8: One of a large set of 6G5, 7B6, 7C6 – these M [Nilsen et al.(1996)] 	th with this ID the integrase binding MAbs that interact Abs inhibit end p	5F8: There is another MAb with this ID that recognizes and unknown protein in HIV [Pinter et al.(1995)] 5F8: MAb interferes with integrase binding to DNA [Haugan et al.(1995)] 5F8: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8, 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)]	tein in HIV [Pin - egrase: 1C4, 2C tt had little effec	ter et al.(1995)] 111, 2E3, 3E11, 3F9, 5F8 2t on integration activities	% 3,3

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
170 6G5	IN(1-16 HXB2)	RT(716-731)	FLDGIDKAQDEHEKYH?	N	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Nilsen et al.(1996)] NOTES:	r 6)]				
	• 6G5: One of a large set of 6G5, 7B6, 7C6 – these M. [Nilsen et al.(1996)]	MAbs that interacted has inhibit end p	6G5: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8, 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)]	egrase: 1C4, 2C	11, 2E3, 3E11, 3F9, 5F8 t on integration activities	8 35
171 7B6	IN(1-16 HXB2)	RT(716-731)	FLDGIDKAQDEHEKYH?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{Ig}\mathrm{G}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Nilsen et al.(1996)]	r 6)]			integrase	
	• 7B6: One of a large set of: 6G5, 7B6, 7C6 − these M [Nilsen et al.(1996)]	MAbs that interact Abs inhibit end p	7B6: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8, 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)]	egrase: 1C4, 2C it had little effec	11, 2E3, 3E11, 3F9, 5F8 t on integration activities	ο 3°
172 7C6	IN(1-16 HXB2)	RT(716-731)	FLDGIDKAQDEHEKYH?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Nilsen et al.(1996)] NOTES:	r 6)]				
	• 7C6: One of a large set of 6G5, 7B6, 7C6 – these M [Nilsen et al.(1996)]	MAbs that interace Abs inhibit end p	7C6: One of a large set of MAbs that interact with the N-terminal part of integrase: 1C4, 2C11, 2E3, 3E11, 3F9, 5F8, 6G5, 7B6, 7C6 – these MAbs inhibit end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)]	egrase: 1C4, 2C	11, 2E3, 3E11, 3F9, 5F8 t on integration activities	S 33
173 6C5	IN(17-38 HXB2)	RT(732-753)	SNWRAMASDFNLPPVVA- KEIVA?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Haugan et al.(1995), Nilsen et al.(1996)] NOTES:	r 95), Nilsen et al.	(1996)]			
	6C5: MAb interferes with6C5: This MAb inhibits et al.(1996)]	integrase bindingend processing	6C5: MAb interferes with integrase binding to DNA [Haugan et al.(1995)] 6C5: This MAb inhibits end processing and DNA joining, but had little effect on et al.(1996)]	effect on	integration activities [Nilsen	n

MAb ID	Location	WEAU	Sequence	Neutranzing	Immunogen	Species(Isotype)
174 8G4	IN(22-31 + 82-101 HXB2)	RT	MASDFNLPPV + GYIE- AEVIPAETGQETAYFI?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Haugan et al.(1995), Nilsen et al.(1996)] NOTES:	r 195), Nilsen et al.	(1996)]		,	
	 8G4: This MAb reacted strongly with peptides IN(12-31) an it did not react with a deletion mutant of positions 17-38 – it had little effect on integration activities [Nilsen et al.(1996)] 8G4: MAb interferes with integrase binding to DNA [Hauga 	rongly with pepti letion mutant of p tion activities [Ni integrase bindin	8G4: This MAb reacted strongly with peptides IN(12-31) and IN(22-42), and less strongly with peptide IN(82-101) – it did not react with a deletion mutant of positions 17-38 – this MAb inhibits end processing and DNA joining, but had little effect on integration activities [Nilsen et al.(1996)] 8G4: MAb interferes with integrase binding to DNA [Haugan et al.(1995)]	and less strongly bits end process	y with peptide IN(82-101 sing and DNA joining, bu	# 0
175 4D6	IN(42-55 HXB2)	RT(757-770)	KCQLKGEAMHGQVD?	Z	bacterial expressed	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	 Donor: B. Ferns and R. Tedder References: [Haugan et al.(1995), Nilsen et al.(1996)] NOTES: 4D6: This MAb inhibits end processing and DNA 4D6: MAb interferes with integrase binding to DN 	er 195), Nilsen et al. 1 nd processing and integrase bindin	 nor: B. Ferns and R. Tedder ferences: [Haugan et al.(1995), Nilsen et al.(1996)] YTES: 4D6: This MAb inhibits end processing and DNA joining, and reduces reintegration 4D6: MAb interferes with integrase binding to DNA [Haugan et al.(1995)] 		activity [Nilsen et al.(1996)]	
176 4F6	IN(56-102 HXB2)	RT(771-817)	CSPGIWQLDCTHLEGK- VILVAVHVASGYIEAEV- IPAETGQETAYFLL?	Z	bacterial expressed integrase	$\operatorname{murine}(\operatorname{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Haugan et al.(1995), Nilsen et al.(1996)] NOTES:	ır 195), Nilsen et al.ı	(1996)]			
	4F6: MAb binding had m4F6: MAb interferes with	inimal effects on integrase binding	4F6: MAb binding had minimal effects on IN <i>in vitro</i> activities [Nilsen et al.(1996)] 4F6: MAb interferes with integrase binding to DNA [Haugan et al.(1995)]	al.(1996)] 		
177 SD9	IN(186-250 HXB2)	RT(901-965)	?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1_{\mathrm{K}}})$
	Donor: B. Ferns and R. Tedder References: [Nilsen et al.(1996)] NOTES:	(6)]				
	 5D9: MAb binding had minimal effects on IN in vitro activities [Nilsen et al.(1996)] 5D9: While C-term and N-term anti-Integrase MAbs interfere with Integrase-DNA binding, 5D9 which binds more 	inimal effects on [-term anti-Integr	5D9: MAb binding had minimal effects on IN in vitro activities [Nilsen et al.(1996)]	al.(1996)]		

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
178 8E5	IN(262-271 HXB2)	RT(977-986)	RRKAKIIRDY?	N	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Haugan et al.(1995), Nilsen et al.(1996)] NOTES:	er 995), Nilsen et al.	(1996)]			
	 8E5: A set of three MAbs recogni react with HIV-2 IN – these MAbs disintegration [Nilsen et al.(1996)] 8E5: MAb interferes with integras 	ss recognize an ep ese MAbs inhibit al.(1996)] h integrase bindin	8E5: A set of three MAbs recognize an epitope in this region, 7C3, 7F11, and 8E5 – all three HIV-1 MAbs cross-react with HIV-2 IN – these MAbs inhibit end-processing, DNA joining and reintegration, and had little effect on disintegration [Nilsen et al.(1996)] 8E5: MAb interferes with integrase binding to DNA [Haugan et al.(1995)]	11, and 8E5 – all 1 g and reintegration 5)]	all three HIV-1 MAbs cross- ation, and had little effect on	S-
179 7C3	IN(262-271 HXB2)	RT(977-986)	RRKAKIIRDY?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	 Donor: B. Ferns and R. Tedder References: [Haugan et al.(1995), Nilsen et al.(1996)] NOTES: 7C3: A set of three MAbs recognize an epitope in react with HIV-2 IN – these MAbs inhibit end-prodisintegration [Nilsen et al.(1996)] 	er 995), Nilsen et al. ss recognize an ep ese MAbs inhibit al.(1996)]	nor: B. Ferns and R. Tedder erences: [Haugan et al.(1995), Nilsen et al.(1996)] TES: 7C3: A set of three MAbs recognize an epitope in this region, 7C3, 7F11, and 8E5 – all three HIV-1 MAbs cross- react with HIV-2 IN – these MAbs inhibit end-processing, DNA joining and reintegration, and had little effect on disintegration [Nilsen et al.(1996)]	11, and 8E5 – all 1 g and reintegration	all three HIV-1 MAbs cross- ation, and had little effect on	on
180 7F11	IN(262-271 HXB2)	RT(977-986)	RRKAKIIRDY?	Z	bacterial expressed integrase	$\mathrm{murine}(\mathrm{IgG}_{1\kappa})$
	Donor: B. Ferns and R. Tedder References: [Lasky et al.(1987), Nilsen et al.(1996)] NOTES:	ler 87), Nilsen et al.(1	.996)]		,	
	 7F11: There is another MAb with the TF11: A set of three MAbs recogn react with HIV-2 IN – these MAbs disintegration [Nilsen et al.(1996)] 	Ab with this nam bs recognize an epese MAbs inhibit al.(1996)]	7F11: There is another MAb with this name that binds to gp120 [Lasky et al.(1987)] 7F11: A set of three MAbs recognize an epitope in this region, 7C3, 7F11, and 8E5 – all three HIV-1 MAbs cross-react with HIV-2 IN – these MAbs inhibit end-processing, DNA joining and reintegration, and had little effect on disintegration [Nilsen et al.(1996)]	et al.(1987)] 11, and 8E5 – all i g and reintegration	three HIV-1 MAbs cros	S-

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
181 MAb 35	IN(?264-273) RT(979-988) K./ Donor: ? References: [Barsov et al.(1996), Acel et al.(1998)]	RT(979-988) 6), Acel et al.(19	KAKIIRDYGK 98)]	Z	rec IN	$\mathrm{murine}(\mathrm{Ig}\mathbf{G}_\kappa)$
	 MAb 35:There appears to be two IN A et al.(1994)] MAb 35: Although MAb 35 does no disintegration [Barsov et al.(1996)] MAb 35: Integrase was shown to have inhibits this activity [Acel et al.(1998)] 	be two IN Abs v 35 does not inl(1996)] nown to have int et al.(1998)]	MAb 35:There appears to be two IN Abs with similar names: MAb 35 and 35 [Barsov et al.(1996), Bizub-Bender et al.(1994)] MAb 35: Although MAb 35 does not inhibit HIV-1 IN, Fab 35 inhibits 3'-end processing, strand transfer and disintegration [Barsov et al.(1996)] MAb 35: Integrase was shown to have intrinsic DNA polymerase activity that can catalyze gap repair – MAb 35 inhibits this activity [Acel et al.(1998)]	and 35 [Barsov of the state of	sov et al.(1996), Bizub-Bender processing, strand transfer and catalyze gap repair – MAb 35	id er
182 12	IN(1-58) Donor: ?	RT		Z	rec IN	$\mathrm{murine}(\mathrm{IgG}_{2a})$
	References: [Bizub-Bender et al.(1994), Levy-Mintz et al.(1996)] NOTES: • 12: BALB/c mice were immunized with rec integrase, hybridor the antibodies characterized – the Zn finger motif is in the bind group [Bizub-Bender et al.(1994)]	al.(1994), Levy- nunized with rec d – the Zn finger (1994)]	erences: [Bizub-Bender et al.(1994), Levy-Mintz et al.(1996)] TES: 12: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized – the Zn finger motif is in the binding region – MAbs 12, 13 and 35 form a competition group [Bizub-Bender et al.(1994)]	sing anti-integras	se Abs were generated, an and 35 form a competitic	й d
	 12: Used for the creation neutralization of IN activirelative binding affinity to 	of single chain y prior to integr IN: $12 > 17 = 3$	12: Used for the creation of single chain variable antibody fragments (SFvs) for neutralization of IN activity prior to integration, whether the Ab is expressed in the relative binding affinity to IN: $12 > 17 = 33 > 21 > 4$ [Levy-Mintz et al.(1996)]	s (SFvs) for inte ressed in the nua .(1996)]	internal cellular expression – nucleolus or the cytoplasm –	1 1
183 35	IN(1-58) RT Donor: ? References: [Bizub-Bender et al.(1994)]	RT al.(1994)]		Z	rec IN	$\mathrm{murine}(\mathrm{IgG}_{2b})$
	• 35: There appears to be et al.(1994)]	wo IN Abs wit	There appears to be two IN Abs with similar names: MAb 35 and 35 [Barsov et al.(1996), Bizub-Bender L.(1994)]	nd 35 [Barsov e	t al.(1996), Bizub-Bendo	C. C.
	 35: BALB/c mice were immunized the antibodies characterized – the igroup [Bizub-Bender et al.(1994)] 	nunized with rec d – the Zn finger (1994)]	35: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized – the Zn finger motif is in the binding region – MAbs 12, 13 and 35 form a competition group [Bizub-Bender et al.(1994)]	sing anti-integrae 1 – MAbs 12, 13	grase Abs were generated, and 13 and 35 form a competition	nd
184 13	IN(1-58) Donor: ?	RT		Z	rec IN	$\operatorname{murine}(\operatorname{IgG}_1)$
	References: [Bizub-Bender et al.(1994)] NOTES:	al.(1994)]				
	 13: BALB/c mice were immunized the antibodies characterized – the group [Bizub-Bender et al.(1994)] 	nunized with rec d – the Zn finger (1994)]	13: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized – the Zn finger motif is in the binding region – MAbs 12, 13 and 35 form a competition group [Bizub-Bender et al.(1994)]	sing anti-integras 1 – MAbs 12, 13	grase Abs were generated, and 13 and 35 form a competition	nd m

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
185 14	IN(1-58) Donor: ? References: [Bizuth NOTES: • 14: BALB/c mand the antibod group [Bizub-E	IN(1-58) RT N rec IN rec IN 1 References: [Bizub-Bender et al.(1994)] NOTES: • 14: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized – the Zn finger motif is in the binding region – MAbs 14 and 17 form a competition group [Bizub-Bender et al.(1994)]	h rec integrase, hybrido n finger motif is in the bi	N mas expressing anti-int nding region – MAbs 1	rec IN tegrase Abs were gen 4 and 17 form a com	$\mathrm{murine}(\mathrm{IgG}_1)$ nerated, petition
186 17	IN(1-58) Donor: ? References: [Bizub NOTES: • 17: BALB/c m	IN(1-58) RT N rec IN rec IN rec IN rec IN References: [Bizub-Bender et al.(1994), Levy-Mintz et al.(1996)] NOTES: • 17: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, only the particular the Ze force motific in the kinding region. Make 14 and 17 form a competition	vy-Mintz et al.(1996)] h rec integrase, hybrido	N mas expressing anti-int	rec IN tegrase Abs were ger	$\begin{array}{c} \text{murine } \operatorname{Ig}G_1) \\ \\ \text{nerated,} \end{array}$
	• 17: Used for to neutralization or relative binding	17: Used for the creation of single chain variable antibody fragments (SFvs) for internal cellular expression – neutralization of IN activity prior to integration, whether the Ab is expressed in the nucleolus or the cytoplasm – relative binding affinity to IN: $12 > 17 = 33 > 21 > 4$ [Levy-Mintz et al.(1996)]	ain variable antibody fi egration, whether the A = 33 > 21 > 4 [Levy-Mi	ragments (SFvs) for in b is expressed in the n intz et al.(1996)]	ternal cellular expre	ssion – blasm –
187 21	IN(58-141) Donor: ? References: [Bizub	IN(58-141) PT Donor: ? References: [Bizub-Bender et al.(1994), Levy-Mintz et al.(1996)] NOTES:	vy-Mintz et al.(1996)]	Z	rec IN	$\text{murine Ig} G_{2b})$
	 21: BALB/c m and the antibod 21: Used for the neutralization of relative binding 	21: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized [Bizub-Bender et al.(1994)] 21: Used for the creation of single chain variable antibody fragments (SFvs) for internal cellular expression – neutralization of IN activity prior to integration, whether the Ab is expressed in the nucleolus or the cytoplasm – relative binding affinity to IN: $12 > 17 = 33 > 21 > 4$ [Levy-Mintz et al.(1996)]	h rec integrase, hybrido -Bender et al.(1994)] nain variable antibody fi regration, whether the A = 33 > 21 > 4 [Levy-Mi	mas expressing anti-intragments (SFvs) for in b is expressed in the n intz et al.(1996)]	tegrase Abs were genternal cellular expreucleolus or the cytop	nerated, ssion – blasm –

MAD III	Location			(a	
188 4	IN(141-172) Donor: ?	RT		Z	rec IN	murine $\lg G_{2b})$
	 References: [Bizub-Bender et al.(1994), Levy-Mintz et al.(1996)] NOTES: 4: There is another MAb with this ID that reacts with gp41 [C 4: BALB/c mice were immunized with rec integrase, hybridon the antibodies characterized – 4 has a low binding affinity [Bizerization of IN activity prior to integration, whether the Ab is estimating affinity to IN: 12 > 17 = 33 > 21 > 4 [Levy-Mintz et al.(1996)] 	er et al.(1994), I Ab with this ID immunized with cerized – 4 has a on of single chain prior to integrate 12 > 17 = 33 >	TITES: 4: There is another MAb with this ID that reacts with gp41 [Oldstone et al.(1991), Bizub-Bender et al.(1994)] 4: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized – 4 has a low binding affinity [Bizub-Bender et al.(1994)] 4: Used for the creation of single chain variable antibody fragments (SFvs) for internal cellular expression – neutralization of IN activity prior to integration, whether the Ab is expressed in the nucleolus or the cytoplasm – relative binding affinity to IN: 12 > 17 = 33 > 21 > 4 [Levy-Mintz et al.(1996)]	ne et al.(1991), Biz pressing anti-integ ender et al.(1994)] (SFvs) for internal sed in the nucleolu	izub-Bender et al.(1994)] grase Abs were generated, and l] ul cellular expression – neutral- lus or the cytoplasm – relative	34)] ated, and - neutral- - relative
189 19	IN(dis) RT Donor: ? References: [Bizub-Bender et al.(1994)]	RT	DISCONTINUOUS	Z	rec IN	$\text{murine } \lg G_1)$
	• 19: BALB/c mice w and the antibodies ch	er et al.(1994)]				
190 16	IN(dis) RT Donor: ? References: [Bizub-Bender et al.(1994)]	er et al.(1994)] re immunized varacterized – 19	erences: [Bizub-Bender et al.(1994)] TES: 19: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized – 19 has a low binding affinity [Bizub-Bender et al.(1994)]	expressing anti-iub-Bender et al.(1	integrase Abs were ;	enerated,
	NOTES: • 16: BALB/c mice w	er et al.(1994)] re immunized v racterized – 19 RT er et al.(1994)] re immunized v	has a low binding affinity [Biz DISCONTINUOUS	expressing anti-iub-Bender et al.(1) N expressing anti-ii	tegrase Abs were ; 194)] rec IN tegrase Abs were ;	generated, $\operatorname{murine} \operatorname{IgG}_{2a})$ generated,
191 32	NOTES: • 16: BALB/c mice w and the antibodies ch	er et al.(1994)] re immunized v uracterized – 19 RT er et al.(1994)] ere immunized v aracterized [Bizu	Rerences: [Bizub-Bender et al.(1994)] Rerences: [Bizub-Bender et al.(1994)] 19: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized – 19 has a low binding affinity [Bizub-Bender et al.(1994)] 10: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized [Bizub-Bender et al.(1994)]	expressing anti-iub-Bender et al.(1 N expressing anti-ii	tegrase Abs were and post itegrase Abs were and rec IN	enerated, $\operatorname{murine} \operatorname{IgG}_{2a}$), enerated,
	NOTES: • 16: BALB/c mice w and the antibodies ch IN(259-288) Donor: ?	er et al.(1994)] re immunized v aracterized – 19 RT er et al.(1994)] re immunized v aracterized [Bizn RT	has a low binding affinity [Biz DISCONTINUOUS with rec integrase, hybridomas ib-Bender et al.(1994)]	expressing anti-iub-Bender et al.(1 N expressing anti-ii	tegrase Abs were app4)] rec IN tegrase Abs were appeared in the second i	generated, $\operatorname{murine} \ \operatorname{Ig} G_{2a})$ generated, $\operatorname{murine} \ \operatorname{Ig} G_{2b})$
	NOTES: • 16: BALB/c mice were immunized and the antibodies characterized [Biz IN(259-288) RT Donor: ? References: [Bizub-Bender et al.(1994)] NOTES:	er et al.(1994)] re immunized v uracterized – 19 RT er et al.(1994)] re immunized v aracterized [Bizz RT RT er et al.(1994)]	vith rec integrase, hybridomas has a low binding affinity [Biz DISCONTINUOUS with rec integrase, hybridomas b-Bender et al.(1994)]	expressing anti-iub-Bender et al.(1 N expressing anti-ii	tegrase Abs were appears in tegrase Abs were appears in tegrase Abs were appeared in the second in t	enerated, $\operatorname{murine} \operatorname{Ig} G_{2a}$, enerated, $\operatorname{murine} \operatorname{Ig} G_{2b}$

192 33 In D	IN(259-288) RT Donor: ? References: [Bizub-Bender et al.(1994), Levy-Mintz et al.(1996)] NOTES: 33: BALB/c mice were immunized with rec integrase, hybri-	RT al.(1994), Lev	y-Mintz et al.(1996)]	Z	rec IN	$\text{murine IgG}_{2b})$
	• 33: BALB/c mice were in					
	and the antibodies characte33: Used for the creation neutralization of IN activitrelative binding affinity to	nmunized with nmunized with mixed – MAbs erized – Mabs of single characteristic prior to into the prior to into IN: 12 > 17 =	33: BALB/c mice were immunized with rec integrase, hybridomas expressing anti-integrase Abs were generated, and the antibodies characterized – MAbs 32 and 33 form a competition group [Bizub-Bender et al.(1994)] 33: Used for the creation of single chain variable antibody fragments (SFvs) for internal cellular expression – neutralization of IN activity prior to integration, whether the Ab is expressed in the nucleolus or the cytoplasm – relative binding affinity to IN: $12 > 17 = 33 > 21 > 4$ [Levy-Mintz et al.(1996)]	pressing anti-in group [Bizub-E ts (SFvs) for ir pressed in the n L(1996)]	tegrase Abs were generategrase Abs were generatender et al.(1994)] sternal cellular expressional cellular expressional cellular expressional description and the cytoplas	ated, on – sm –
193 <i>7C</i> 4 R	RT(dis)	RT(dis)	DISCONTINUOUS		rec vaccinia-RT WRRT	$murine(IgG_1)$
N R D	Donor: ? References: [Chiba et al.(1997)] NOTES:	7)]				
	• 7C4: Dose-dependent inhibition of polymerase activity of RT of s GH-1 or LAV-2 or SIV strains MAC or MND [Chiba et al.(1997)]	bition of polyains MAC or N	7C4: Dose-dependent inhibition of polymerase activity of RT of strains IIIB, Bru and IMS-1, but not HIV-2 strains GH-1 or LAV-2 or SIV strains MAC or MND [Chiba et al.(1997)]	s IIIB, Bru and l	IMS-1, but not HIV-2 str	rains
194 3D12 R	RT(dis)	RT	DISCONTINUOUS		rec vaccinia-RT WRRT	$murine(IgG_{2a})$
N & D	Donor: ? References: [Chiba et al.(1997)] NOTES: • 3D12: There is an anti-Nef N	7)] f MAb that als	 onor: ? eferences: [Chiba et al.(1997)] OTES: 3D12: There is an anti-Nef MAb that also has this name (see [Chiba et al.(1997)] 	al.(1997)]		
195 6B9 R	RT(dis)	RT	DISCONTINUOUS		rec vaccinia-RT WRRT	$\mathrm{murine}(\mathrm{Ig}\mathrm{G}_{2a})$
D R	Donor: ? References: [Chiba et al.(1997)]	7)]				
196 3F10 R	RT(dis)	RT	DISCONTINUOUS		rec vaccinia-RT WRRT	$murine(IgG_{2a})$
D	Donor: ? References: [Chiba et al.(1997)]	7)]				

MAb ID	Location	WEAU	Sequence	Neutralizing	Immunogen	Species(Isotype)
197 RT-4	RT RT RT Donor: ? References: [Li et al.(1993), Gu et al.(1996)] NOTES: • RT-4: Increased nevirapine and delavirding	RT 3u et al.(1996 e and delavir	or: ? erences: [Li et al.(1993), Gu et al.(1996)] RT-4: Increased nevirapine and delavirdine inhibition, no effect on AZT inhibition [Gu et al.(1996)]	N AZT inhibition [Gu	? et al.(1996)]	$\operatorname{murine}(\operatorname{IgG}_{2b})$
198 anti-HIV-1 RT	RT	RT	?	?	?	murine(IgG)
	 Donor: ? References: [di Marzo Veronese et al.(1986), Maciejewski et al.(1995), Wainberg & Gu(1995)] NOTES: anti-HIV-1 RT: Cloned heavy and light chains to express Fab intracellularly, preventing HIV MAb was broadly cross-reactive with clinical strains and even HIV-2 [Maciejewski et al.(1986)] Commentary on Maciejewski et al. [Wainberg & Gu(1995)] 	sse et al.(1986) avy and light cactive with constitution with cons	 nor: ? èrences: [di Marzo Veronese et al.(1986), Maciejewski et al.(1995), Wainberg & Gu(1995)] TES: anti-HIV-1 RT: Cloned heavy and light chains to express Fab intracellularly, preventing HIV infection in vitro – this MAb was broadly cross-reactive with clinical strains and even HIV-2 [Maciejewski et al.(1995)] Commentary on Maciejewski et al. [Wainberg & Gu(1995)] 	Wainberg & Gu(19) ellularly, preventing -2 [Maciejewski et a	(1995)] ing HIV infection <i>in vitro</i> et al.(1995)]	- this
199 polyclonal	RT	RT			DNA gag/pol, vif, and CMN160 vaccine	murine
	Donor: ? References: [Kim et al.(1997)] NOTES: • A gag/pol, vif or CMN160 DNA vac molecules B7 and IL-12, gave a dr as Ab response detected by ELISA	DNA vaccine gave a dramal	or: ? erences: [Kim et al.(1997)] TES: A gag/pol, vif or CMN160 DNA vaccine, when delivered in conjunction with the plasmid encoding the co-stimulatory molecules B7 and IL-12, gave a dramatic increase in both the cytotoxic and proliferative responses in mice, as well as Ab response detected by ELISA	ion with the plasmic oxic and proliferati	nid encoding the co-stimulatory ative responses in mice, as well	ılatory ıs well